Ontario. Curriculum Guidelines. Primary & Junior Divisions.
Support documents. Discover Ontario through the Road Map 1977 Cop 2

Ministry of Education
Ontario

Minister of Education
Hon. Thomas L. Wells

Curriculum Ideas for Teachers

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Discover Ontario Through the Road Map

This pamphlet outlines various activities developed from the official road map of Ontario. They are designed to assist students to learn more about the geography of their home province. This is resource material in support of *The Formative Years, Primary and Junior Divisions.*

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Introduction

The child in the Primary and Junior divisions should be given opportunities to become familiar with the geography and culture of the community, the province, and the country. A systematic study of the Ontario Road Map will enable children to use the map to find information such as distances between cities, the populations of towns and villages, the best route to take on a holiday trip, the locations of provincial parks and airports, and the direction from one point to another. It will give practice in the search for specific information, and the skills developed through such activities will be useful in later years.

Notes to the Teacher

The examples of learning activities which follow suggest ways of exploring various aspects of the road map. Three types of exercises have been developed. Their purpose is to encourage children to browse through the materials, develop skills in the use of the road map, and learn the geography of Ontario.

All students should work from the same map edition. In this pamphlet, the latest edition of the map distributed by the Ontario Ministry of Transportation and Communications has been used for the exercises. Teachers using maps from other sources should ensure that the problems posed can be solved through the use of those maps. It may be necessary to revise some activities to accommodate other map editions.

Some teachers will prefer to use these exercises all at one time and in conjunction with work in environmental studies. Others will prefer to spread the road-map work over the year. The exercises could become an addition to the activity centre of the classroom.

It is not suggested that students complete all activities in one year: teachers can co-ordinate the exercises so that the child is exposed to new aspects of the road map each year.

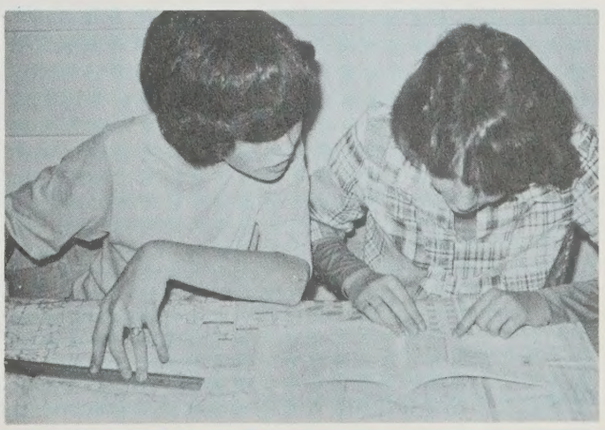
This pamphlet does not purport to replace teaching strategies already developed by teachers; rather, it offers alternatives and is intended to make planning easier and more effective.

Learning Outcomes

It is expected that teachers will provide opportunities to better enable the child to:

- use the index to locate villages, towns, and cities in Ontario;
- obtain information from the map legend, for example, populations of communities, types of highways, boundaries, and locations of hospitals;
- reach conclusions about the locations of various communities in the province;
- calculate distances between communities using the distance chart, the local distance method, and the map scale;
- give directions from one point on the map to another;
- recognize a wide variety of traffic signs and classify them into meaningful groups;
- develop patterns of spatial distribution which will give an increased understanding of the geography of Ontario;
- organize information into a legible format that is easily understood;
- demonstrate the use of skills learned by applying them to real-life situations such as planning a vacation trip, or locating the nearest provincial park;
- work with others in solving problems and completing tasks;
- become more knowledgeable about our province, its geography, culture, and people.

Teachers are encouraged to adjust the expected learning outcomes listed above to match the expectations for the children in their classes.



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Use of the Metric System

It is hoped that metric maps will be available by 1978. In the meantime, students should be encouraged to read the map as printed, and then, where desirable, give the equivalent measurement in metric units. To ease the conversion from imperial to metric, a printed sheet, *Metric Elevations and Distances,* is provided for use with the map.

If a student reads an elevation of 572 feet from the map, a quick glance at the sheet will give the equivalent as 174 m. A distance chart is provided to show the distances between cities in kilometres. This chart should be used in preference to that printed on the map. Also, when distances between points are determined by adding up the mileages along highway segments, it is recommended that the total mileage be converted to kilometres by means of the mileage converter scale provided on the sheet.

Note: Whenever distances are measured by means of the map scale, students should be encouraged to use the kilometre scale, not the mileage scale.

Getting Underway

The exercises which follow have a common format: a problem is stated; a method of solving that problem is given; and additional problems of a similar nature are suggested.

Before beginning a formal study of the road map, the teacher should ensure that children have opportunities to:

- locate Ontario with respect to Canada and to the North American continent. There is an inset map of Canada on the road map which can be useful, or, you might prefer to use an atlas.
- realize that while the maps of Northern Ontario and Southern Ontario occupy the same amount of space on paper, the areas are, in reality, different in size. Refer to the inset map of Canada to support this idea.
- understand that Northern Ontario is divided into districts, while Southern Ontario is divided into counties. The divisions are clearly indicated with solid green lines.
- examine the colours used on the map. Various colours have specific uses, for example, blue for water, red for certain types of roads, green for parks, and yellow for built-up areas.
- note that the typography is designed to assist the reader. The names of larger communities are printed in bigger type, red letters are used to indicate the location of provincial parks, and names of water bodies are printed in blue.
- browse through both sides of the map to note the wealth of information provided, for example, standard traffic signs, radio station call letters, telephone numbers of provincial police detachments, Canadian time zones, and sources of travel information.
- learn how to fold and look after the map.

After developing some familiarity with the road map, students should be ready to work with the problems that are set out in the following sections.

"est" Locations

Problem:

What are some of Ontario's "est" locations?

Many students are interested in records, for example, the largest city, the longest highway, and the highest point of land on the map.

- Browse through both sides of the road map of Ontario to find answers to questions such as those given below.
- Compare your answers with those of another group of students.
- Make up one or two "est" questions yourself.

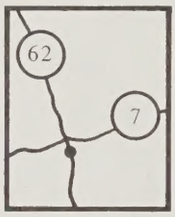
Other Typical Problems:

1. Which community is located farthest north?	*Winisk*
Which community is located farthest east?	*Pointe Fortune*
Which community is located farthest south?	*Pointe Pelee*
Which community is located farthest west?	*Ingolf*
2. Which is the longest highway in Ontario?	*Highway 17*
Which is the largest provincial park in Southern Ontario?	*Algonquin Park*
Which is the largest city in Ontario?	*Toronto*
Which is Ontario's largest district?	*Kenora*
3. Name the Ontario city nearest to Port Huron, Michigan.	*Sarnia*
Name the Ontario city closest to Buffalo, New York.	*Fort Erie*
Name the Ontario city nearest to International Falls, Minnesota.	*Fort Frances*
Name the Ontario city nearest to Hull, Quebec.	*Ottawa*
4. Name the largest Ontario community located on salt water.	*Moosonee*
5. Which highway takes you farthest north?	*Highway 808*

Browsing

Problem:

What town is located near the junction of Highways 7 and 62?

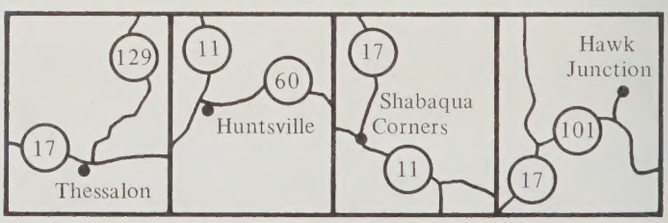


- Find Highway 7.
- Follow it with your finger until you come to the Highway 62 crossing.
- Find the town of Madoc just south of the junction.
- List the highways that are longer than Highway 7.

Many items of interest can be learned by simply browsing through the road map. The search for communities at the junctions of highways can lead to other interesting things along the way. (*See* also Highway Junctions.) Place names indicate early Indian, French, Scottish, Finnish, and English settlements. It is amazing to note the abundance of lakes in Northern Ontario. The concentration of population along and to the west of Lake Ontario is immediately noticeable.

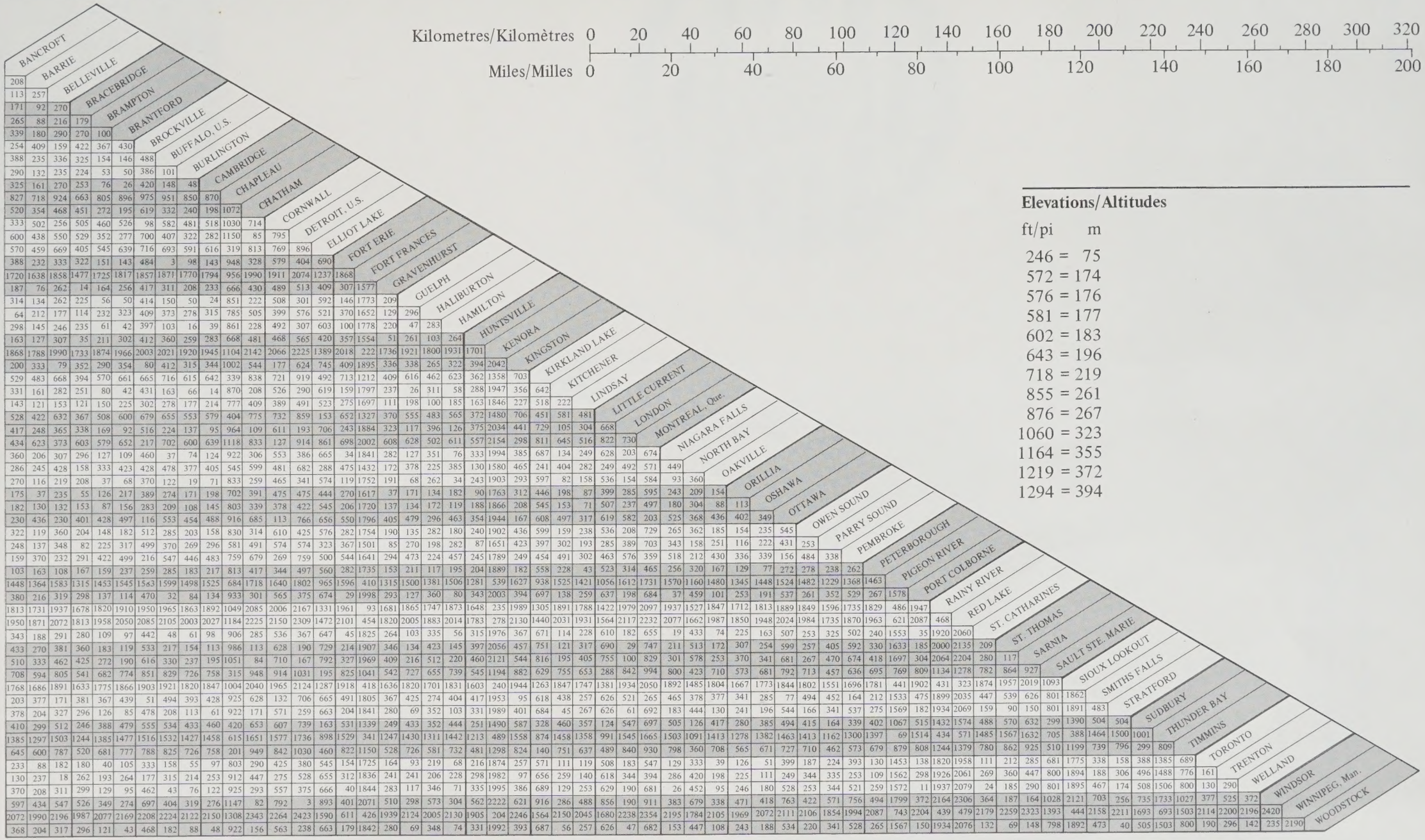
Other Typical Problems:

Use your highway map and the clues provided to locate the following communities. All of them are on, or close to Ontario's longest highways, 11 and 17:



Metric Elevations and Distances/Altitudes et distances en unités métriques

Metric Distance Chart/Tableau des distances en km



Mileage Converter/Conversion des milles en km

Elevations/Altitudes

ft/pi	m
246	= 75
572	= 174
576	= 176
581	= 177
602	= 183
643	= 196
718	= 219
855	= 261
876	= 267
1060	= 323
1164	= 355
1219	= 372
1294	= 394

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Locating Cities, Towns, and Villages

Problem:

Locate the village of Jacksons Point.

- The road map contains an index of cities, towns, and villages in Northern and Southern Ontario with the population figures given in brackets after the place name.
- Find Jacksons Point in the index of place names – it is at location 3-J-23.
- Look for the panel numbers given in yellow boxes at the top of the index. Open the map (as you would a book) to panel 3.
- Find the large letter J on the vertical edge of the map.
- Find figure 23 on the horizontal edge of the map.
- Jacksons Point will be found in the rectangle formed by the guide lines from letter J and figure 23.

Problem:

Locate the town of Marathon.

If the community is not listed in the index for Southern Ontario, try the index for Northern Ontario. Marathon is listed in the Northern Ontario index at location 8-L-8.

Other Typical Problems:

1. Give the map location numbers for:

a) Lobo	*2-M-19*
b) Corkery	*4-F-29*
c) Nobleton	*3-K-22*
d) Yarker	*4-J-28*
e) Quibell	*7-H-3*
f) Wurtele	*9-K-13*

2. Find the following communities on your map:

a) Delhi	*2-N-21*
b) Tobermory	*2-F-19*
c) Malachi	*6-H-1*
d) Thessalon	*9-P-11*
e) Monkland	*5-F-32*
f) Winisk	*8-A-10*

3. On which rivers are the following communities located:

a) Walkerton	*Saugeen River*
b) Caledonia	*Grand River*
c) Killoran	*Abitibi River*

Populations of Communities

Problem:

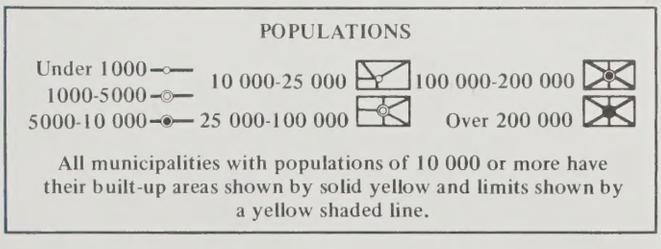
Which town has a larger population, Oil City or Oil Springs?

- Find the communities of Oil City and Oil Springs in the index of place names for Southern Ontario.
- The index gives the population of Oil City as 162, and Oil Springs as 551.

Problem:

Which is the largest community in Grey County?

- Find Grey County on the map.
- Check the population symbols of various communities in Grey County against the explanations in the map legend:


POPULATIONS
Under 1000
1000-5000
5000-10 000
10 000-25 000
25 000-100 000
100 000-200 000
Over 200 000
All municipalities with populations of 10 000 or more have their built-up areas shown by solid yellow and limits shown by a yellow shaded line.

- Owen Sound falls into the category of 10 000 to 25 000. No other community in the county is in that category or larger. Therefore, Owen Sound is the largest community in Grey County.
- Exact figures can be obtained from the index. Owen Sound has a population of 18 005.

Other Typical Problems:

1. Which community in each of the following groups has the largest population:

a) Kenora	*10 268*	c) Ottawa	*292 983*
North Bay	**46 409*	Hamilton	**303 794*
Timmins	*41 957*	Windsor	*199 250*
b) Whitby	*24 935*		
Sarnia	**54 782*		
Orillia	*21 698*		

2. Is Shelbourne the largest community in Dufferin County? *no*
Is Lancaster the largest town in Glengarry County? *no*

3. Use coloured map pins or gummed stars to locate every community in Ontario with a population of 25 000 and over.

Using the Map Legend

Problem:

How do you use the map legend? What kind of information does it provide for a motorist?

The motorist is looking for answers to questions such as the following:

- Which route is the most direct, or the most scenic?
- Where is the nearest bridge to cross to the United States?
- Is there a provincial park in this area?
- Where is the nearest hospital or first-aid station?

If the motorist was at the town of Lucknow, the road map would suggest that:

- the nearest bridge to cross to the United States is at Sarnia;
- Highways 86, 21, and 7 provide the most direct route to Sarnia;
- he can camp at a number of locations including Ipperwash Provincial Park;
- the nearest hospital is at Wingham.

Other Typical Problems:

Working on the following problems will help the student to become familiar with the map legend.

1. There has been an accident near Longlac.
Where is the nearest hospital located? *Geraldton*

2. Which interchange do you use to reach Brighton from the Macdonald Cartier Freeway? *86*

3. Where is the nearest commercial airport from Sturgeon Falls? *North Bay*

4. On what type of highway is Armstrong located? *gravel*

5. A bush pilot has an injured trapper in his airplane. Should he land at Big Trout Lake or at Bearskin Lake? *Big Trout Lake*

6. What is the elevation of Lake Erie? *572 ft* (or 174 m)
(Refer to printed sheet, *Metric Elevations and Distances,* for conversions.)
What is the elevation of Lake Ontario? *246 ft* (or 75 m)
What are the results of a drop in elevation?
waterfall, power, tourist attraction, need for a canal

7. Is Drummond Island in Canada or in the United States? *United States*

8. Where is the closest government campsite from Goderich? *Wright Point*

9. Where is the closest point of entry to the United States from the town of Dunnville? *Buffalo, N.Y.*

Highway Junctions

Problem:

Are highways built to connect villages, towns, and cities, or do the latter develop at the junctions of existing highways? Are there communities located at all or most highway junctions?

There are no ready answers to these questions. No doubt, many communities were founded before roads were built. We can suppose that the subsequent network of highways encouraged their development.

The following questions will lead the student to solve the above problem.

1. Locate the following villages, towns, and cities on the map with the help of the index. List the highways which form junctions at these communities:

a) North Bay	*11*	*17*	*63*
b) Whitby	*2*	*12*	*401*
c) Sudbury	*17*	*69*	*144*
d) Perth	*7*	*43*	
e) Pembroke	*17*	*41*	*62*
f) Markham	*7*	*48*	
g) Smiths Falls	*15*	*29*	*43*
h) Maynooth	*62*	*127*	
i) White River	*17*	*631*	
j) Nipigon	*11*	*17*	*585*

2. Is there a community at the following junctions along Highway 17? Answer *yes* or *no*.

a) 17 and 34	*yes*	e) 17 and 656	*yes*
b) 17 and 44	*no*	f) 17 and 630	*no*
c) 17 and 132	*yes*	g) 17 and 535	*yes*
d) 17 and 60	*no*	h) 17 and 627	*no*

Calculating Distances

A. Using the Distance Chart

Problem:

What is the distance between Belleville and Chapleau?

• The distance between larger communities in Ontario can be found by using the distance chart in the lower left-hand corner of the map of Northern Ontario, or the one provided on the printed sheet accompanying the map which gives the distances in kilometres.

	BANCROFT	BARRIE	BELLEVILLE	BRACEBRIDGE	BRAMPTON	BRANTFORD	BROCKVILLE	BUFFALO, U.S.	BURLINGTON	CAMBRIDGE	CHAPLEAU	CHATHAM	CORNWALL	DETROIT, U.S.
BANCROFT	129													
BARRIE	70	160												
BELLEVILLE	106	57	168											
BRACEBRIDGE	165	55	134	111										
BRAMPTON	211	112	180	168	62									
BRANTFORD	158	254	99	262	228	267								
BROCKVILLE	241	146	209	202	96	91	303							
BUFFALO, U.S.	180	82	146	139	33	31	240	63						
BURLINGTON	202	100	168	157	47	16	261	92	30					
CAMBRIDGE	514	446	574	412	500	557	606	591	528	541				
CHAPLEAU	323	220	291	280	169	121	385	206	149	123	666			
CHATHAM	207	312	159	314	286	327	61	362	299	322	640	444		
CORNWALL	373	272	342	329	219	172	435	253	200	175	715	53	494	
DETROIT, U.S.														

• Find Belleville and Chapleau on the chart.

• The distance between these two communities can be found by reading *down* the Belleville column and *across* the Chapleau column, to arrive at the figure in the rectangle formed where the two columns cross each other (574 miles or 924 km).

Other Typical Problems:

1. What are the distances between the following cities?
   a) Chatham and Kingston — *338 miles* (or 544 km)
   b) Toronto and Timmins — *428 miles* (or 689 km)
   c) Rainy River and Guelph — *1159 miles* (or 1865 km)
   d) Barrie and Welland — *129 miles* (or 208 km)

2. Approximately how many hours will it take to travel from Burlington to Detroit at an average speed of 50 m.p.h. or 80 km/h? *4 hours*

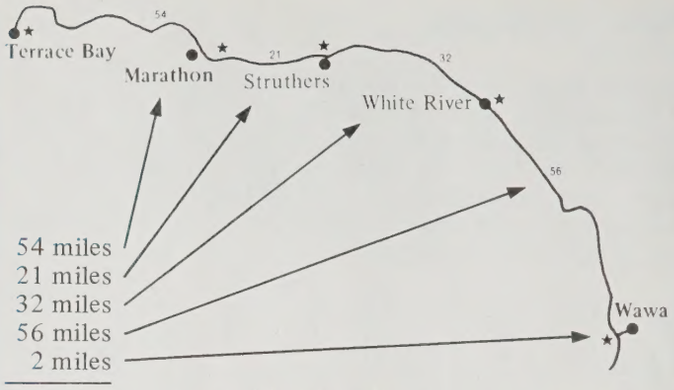
3. Which is the shorter route from North Bay to Kingston
   a) via Pembroke and Smith Falls, or — **293 miles* (or 472 km)
   b) via Oshawa? — *318 miles* (or 512 km)

B. Using the "Black Stars"

Problem:

What is the distance between Terrace Bay and Wawa?

• Distances between smaller communities can be found by using the "black stars" found at the junctions of highways indicating local mileage. The distance between Terrace Bay and Wawa is 165 miles or 266 km, arrived at by adding the following local mileage figures:



165 miles or 266 km (Use the mileage converter scale.)

Other Typical Problems:

1. Calculate the distance between the following locations:
   a) Leamington and Blenheim — *38 miles* (or 61 km)
   b) Courtright and the junction of Highways 80 and 79 — *31 miles* (or 50 km)
   c) Tobermory to Owen Sound via Highways 6, 70 and 21 — *67 miles* (or 108 km)
   d) Tobermory to Owen Sound via Highways 6 and 21 — *72 miles* (or 116 km)

2. Which is the shorter route from Goderich to Lucknow
   a) via Port Albert and Amberley, or — **34 miles* (or 55 km)
   b) via Clinton and Wingham? — *45 miles* (or 72 km)

C. Using the Distance Scales

Problem:

A group of people with snowmobiles would like to travel from Baysville across the lake to Birkendale and back. What distance will they cover on the round trip?

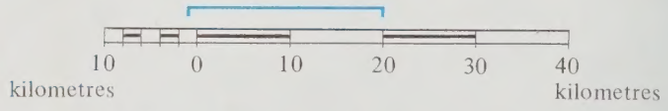
• Find Baysville and Birkendale on your map.

• Find the distance scales (given in miles and kilometres) in the map legend. (Note: This is the scale for Southern Ontario. The scale for Northern Ontario is located on the reverse side on James Bay.)

• Place a strip of paper on the map to join the two communities.

• Mark the locations on the strip with dots.

• Join the dots with a straight line.



• Place the strip above the distance scale so that the right-hand dot is aligned to a frame on the scale.

• The distance from Baysville to Birkendale is 20 km + 1 km (to the left of the zero), or 21 km. Therefore, the snowmobiles will cover 42 km on the round trip.

Other Typical Problems:

1. How many communities are found within a radius of 30 km from Owen Sound? *27*

2. How long would it take to snowmobile across Lake Nipigon from Ferland to Macdiarmid at a speed of 10 km/h? *10 hours*

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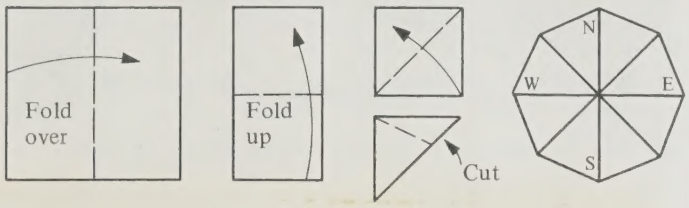
Finding the Direction

Problem:

In what direction is Renison from Moosonee?

• Take a square sheet of paper about 6 cm by 6 cm. As shown in the diagram below, fold it in half, then in quarters, and then diagonally in eighths. Round the free edges using a pair of scissors. Unfold the sheet, flatten it out, and mark the folds: N, NE, E, SE, S, SW, W, and NW.



• You now have a "compass rose" that will help you give the approximate direction of one point from another.

• Find the light vertical line a little to the west of Moosonee that has the number 81° at its upper limit. This is a line of longitude and runs north-south.

• Lay the compass rose with its centre over Moosonee so that the north-south line is parallel to the 81° line of longitude. Read off the direction of Renison.

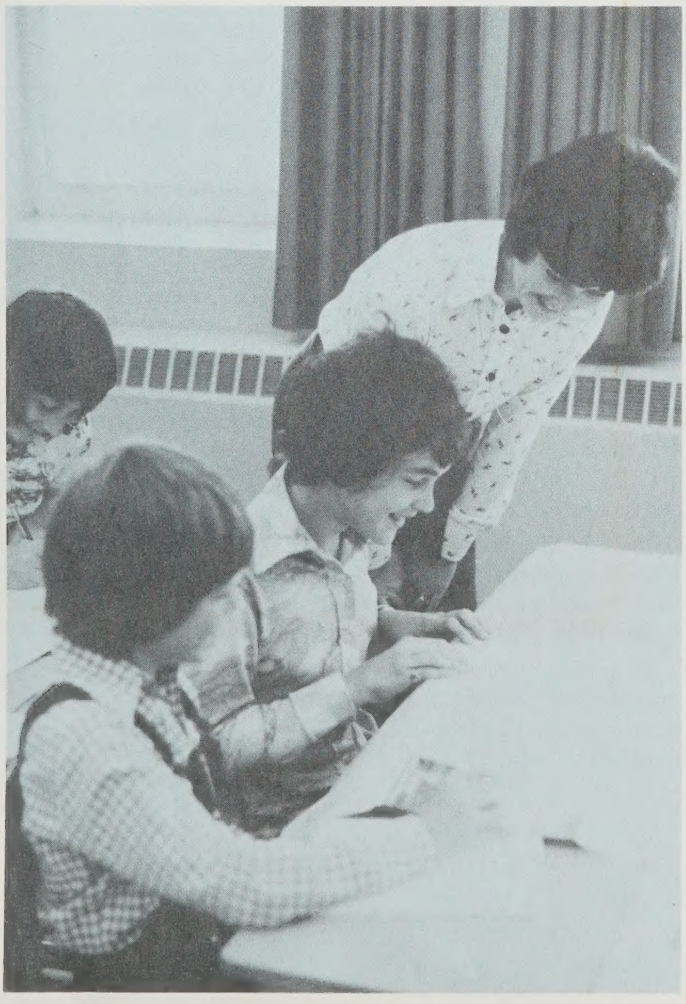
• Renison is southwest of Moosonee.

Other Typical Problems:

1. In what general direction does the Albany River flow? *east*

2. In what direction is Thunder Bay from Atikokan? *southeast*

3. Name the community 11 km northwest of Maynooth. *Lake St. Peter*

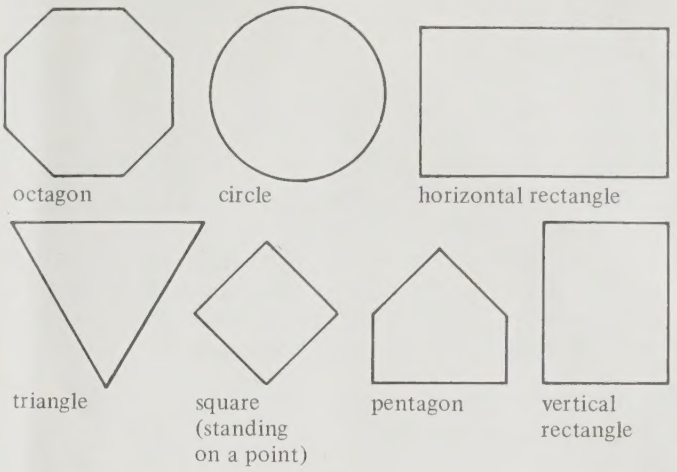


Traffic Signs

Problem:

Identify and explain the different traffic signs.

Examine the different types of traffic signs and what they mean. The recognition of their shapes and symbols is valuable. Look for the following shapes:



Refer to *The Driver's Handbook*, a free publication of the Ontario Ministry of Transportation and Communications, which has an excellent section on traffic signs.

Other Typical Problems:

1. Draw the following shapes and insert the signs associated with them: triangle, square (standing on a point), octagon, circle, pentagon, rectangle.

2. Draw and colour each of the following traffic signs: Stop; Bump; Yield Right of Way; No Turns; School Zone; Truck Route; Maximun Speed Ahead.

3. Draw three traffic signs that use symbols. Draw three traffic signs that use words.

The Geography of Community Locations

Problem:

Many of the villages, towns, and cities of Ontario are located on water, especially at the junctions of rivers or river mouths. Why were these locations favoured by the early settlers?

• Make a list of about 20 communities scattered across the province.

• Use the map to locate these communities and note how many of them are located on water.

• Check which communities are located on lakes, on rivers, at the junctions of rivers, or river mouths.

• Use other sources of information to find out how each community relies on its waterways.

• Select two communities. Find out why each one was established at that particular location. Share your findings with other students in the class.

Other Typical Problems:

1. Use the map index to locate the following communities. List the body or bodies of water associated with each community:

a) Sault Ste. Marie	*St. Marys River*
b) Brockville	*St. Lawrence River*
c) Windsor	*Detroit River*
d) New Liskeard	*Lake Timiskaming*
e) London	*Thames River*
f) Kenora	*Lake of the Woods*

2. The production of pulp and paper requires a lot of water. Name the source of water for the mills at:

a) Kapuskasing	*Kapuskasing River*
b) Iroquois Falls	*Abitibi River*
c) Cornwall	*St. Lawrence River*
d) Thunder Bay	*Lake Superior*

3. Ontario has many important ports. Name the body of water on which the following port cities are located:

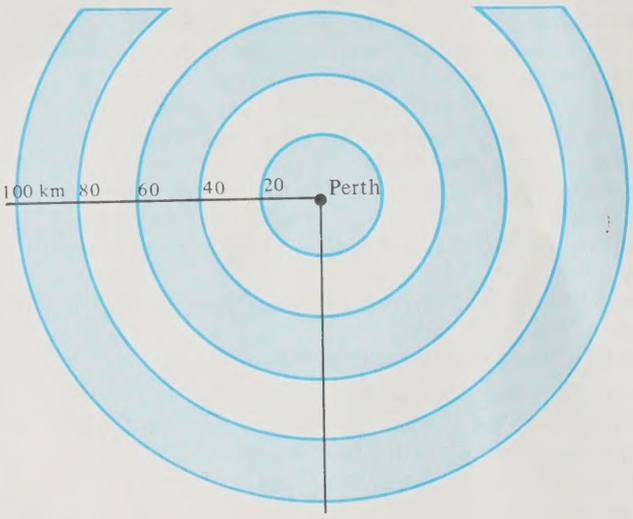
a) Toronto	*Lake Ontario*
b) Kingston	*Lake Ontario*
c) Owen Sound	*Georgian Bay*
d) Sarnia	*St. Clair River*
e) Hamilton	*Lake Ontario*
f) Port Colborne	*Lake Erie*

Your Community in Relation to Ontario

Problem:

How is the rest of Ontario related in distance and direction to your home town? What activities take place in other communities that affect you?

- Pin up the road map on the bulletin board. Indicate your home community, for example, Perth, with a map pin.
- Draw a series of concentric circles on a piece of acetate or on the map itself around the community, using bold lines. The radii of the circles should increase at a constant rate, possibly 20 km, 50 km, or 100 km. Extend the circles to include as much of Ontario and the neighbouring states and provinces as you wish.



- Each small group of students is responsible for one ring. They should be ready to give directions and distances (in kilometres) to major communities within the ring, possible sources of income, tourist attractions, items of historical interest, and so forth.
- The work can be further subdivided by asking a student to be responsible for a quadrant of the circle assigned to his or her group.

Other Typical Problems:

1. Draw a circle around your community to show the radius within which you can travel by automobile in one hour. Show the location of all winter and summer recreational opportunities, for example, places to skate, ski, fish, and swim.
2. Complete a chart that will give information about all communities with a population of 1000 and over which are within a radius of either 25 km, 50 km, or 100 km of your village, town, or city.

A Review

Are students able to use the Ontario Road Map to find specific information? Can they use it to plan trips and to learn more about the province?

- Draw up a series of questions to review various aspects of road map usage.
- Have students plan in detail the next field trip that will be undertaken.
- Consider some of the extremely practical uses of the map by placing the map work within the context of actual situations.
- Determine what has been learned about the geography of Ontario from the exercises through discussions or research assignments.

Problems:

1. Use the highway map and your atlas to list the provinces and states which border on Ontario.
2. State four major differences in the regions represented by square D-8 and square K-20. (Note: It is hoped that some students will realize that D-8 represents a larger land area than that represented by K-20.)
3. Which highway is longer, 401 or 11?
4. Which town has the larger population, Schreiber or Ingersol?
5. Which community is farther west, Arthur or Alma?
6. What are the call letters of the radio station at Guelph, and where on your radio would you tune in to hear this station when travelling in the vicinity?
7. What is the telephone number of the Provincial Police District Headquarters at Thunder Bay?
8. What is the distance (in kilometres) and the direction of Newmarket from Lindsay? Is it possible to drive that distance safely in two hours (highway speed limit 80 km/h, speed limit in towns and cities 50 km/h)?
9. What route would take you from Lindsay to Kingston in the shortest time?
10. Name a government campsite within 100 km of Sarnia.
11. What time is it in Kenora when it is 07:30 in Toronto?

Further Topics

Consider some of the following ideas:

- Prepare additional exercises based on other aspects of the Ontario Road Map: the legend, map inserts, and time zones.
- Prepare exercises based upon road maps from other provinces of Canada.
- Use atlas maps to gain new insights into the geography of Ontario: its location, boundaries, length (from north to south), width, and neighbours.
- Develop a better understanding of large numbers associated with the province: a population of 8 000 000, an area of 1 068 582 km^2, and a highway 2155 km in length.
- Use colourful map pins to locate: every toll bridge in Ontario; every provincial and national park; and every town and city with a population of 10 000 or less.
- Have each student make a list of things that everyone should know about Ontario. Compile the information into a booklet and distribute to the class.
- Learn more about driving on Ontario's highways, using the free publication, *The Driver's Handbook,* from the Ministry of Transportation and Communications.
- Design a tourist brochure about your community.
- Plan a field trip that might be taken by the class. Give such information as the route you would take, the time required, rest stops, and places to visit on the way.

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